

Serial No.: 10/040,765
Group Art Unit: 2832

AMENDMENTS TO CLAIMS

- Please amend pending claims 1 and 6 as indicated below. A complete listing of all claims and their status in the application are as follows:

1. (currently amended) A method of manufacturing a spiral inductor comprising:

providing a substrate;

forming an inductor dielectric layer over the substrate;

forming a spiral opening in the inductor dielectric layer;

forming a spiral inductor in the spiral opening, forming the spiral inductor including; and including:

forming a plurality of vias in the cross-section of the spiral inductor, the plurality of vias commonly connected at top or bottom and unconnected respectively at bottom or top, to define parallel spiral vias connected together at center proximate and center distal ends of the spiral inductor.

2. (withdrawn) The method as claimed in claim 1 wherein:

forming the spiral inductor includes:

forming a spiral line in the spiral opening; and

forming the plurality of parallel spiral vias above the spiral line and integral therewith.

3. (original) The method as claimed in claim 1 wherein:

forming the spiral inductor includes:

forming a spiral line over the plurality of parallel spiral vias and integral therewith.

4. (original) The method as claimed in claim 1 including:

forming a first connecting portion;

forming connecting via between the first connecting portion and the center proximate end of the spiral inductor; and

Serial No.: 10/040,765
Group Art Unit: 2832

forming a second connecting portion connected to the center distal end of the spiral inductor.

5. (original) The method as claimed in claim 1 wherein:
forming the spiral opening forms a multi-turn spiral from a group consisting of square, rectangular, and circular spirals.

6. (currently amended) A method of manufacturing a spiral inductor comprising:

providing a substrate;

forming a field dielectric layer over the substrate;

forming an inductor dielectric layer over the field dielectric layer;

forming a spiral opening in the inductor dielectric layer;

forming a spiral inductor in the spiral opening, forming the spiral inductor including; including:

forming a plurality of vias in the cross-section of the spiral inductor, the plurality of vias commonly connected at top or bottom and unconnected respectively at bottom or top, to define parallel spiral vias connected together at center proximate and center distal ends of the spiral inductor;

forming a first connecting portion connected to the center proximate end of the spiral inductor; and

forming a second connecting portion connected to the center distal end of the spiral inductor.

7. (withdrawn) The method as claimed in claim 6 wherein:

forming the spiral inductor includes:

forming a spiral line in the spiral opening connected together to the parallel spiral vias at the center proximate and the center distal ends of the spiral inductor; and

forming the plurality of parallel spiral vias above the spiral line and integral therewith.

Serial No.: 10/040,765
Group Art Unit: 2832

8. (original) The method as claimed in claim 6 wherein:
forming the spiral inductor includes:
 forming a spiral line over the plurality of parallel spiral vias and integral therewith, the spiral line connected together to the parallel spiral vias at the center proximate and the center distal ends of the spiral inductor.
9. (original) The method as claimed in claim 6 including:
forming a connecting portion dielectric over the field dielectric and under the inductor dielectric layer;
forming an opening in the connecting portion for the first connecting portion;
forming connecting via between the first connecting portion and the center proximate end of the spiral inductor; and
forming a second connecting portion connected to the center distal end of the spiral inductor.
10. (original) The method as claimed in claim 6 wherein:
forming the spiral opening forms a multi-turn spiral from a group consisting of square, rectangular, and circular spirals.

Claims 11-21. (withdrawn)